

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 – 37. (Canceled)

38. (Currently Amended) A computer readable medium bearing a computer readable representation of an object, wherein said object comprises primitive and non-primitive members, and wherein said object is serialized for retrieval by computer hardware, the computer readable representation comprising:

a ~~single~~ binary fragment associated with said object, said binary fragment comprising that comprises both a binary fragment header and a binary fragment payload, wherein the binary fragment payload comprises all primitive data members of said object and wherein said primitive data members are in a storage engine record format;

wherein the binary fragment header comprises a type field and a length field;

wherein said primitive data members comprise only members of a primitive data type, said primitive data type comprising at least integers and excluding at least collections; and

~~wherein the type field indicates the fragment is a binary fragment;~~

~~wherein the length field indicates a length of the binary fragment payload;~~

~~wherein the payload comprises a plurality of primitive data members in storage engine record format;~~

~~wherein said plurality of primitive data members are all of the primitive data members of the object; and~~

at least one additional fragment comprising at least one non-primitive member of the object.

39. (Canceled)

40. (Previously Presented) The computer readable medium of claim 38, wherein said at least one additional fragment comprises:

at least one Large Object (LOB) fragment comprising a LOB fragment header and a LOB fragment payload;

wherein the LOB header comprises a LOB type field, a value type field, and a LOB length field;

wherein the LOB type field indicates the LOB fragment is a LOB fragment;

wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location;

wherein the LOB length field indicates a length of the LOB fragment payload.

41. (Previously presented) The computer readable medium of claim 40, wherein the LOB fragment payload comprises a LOB.

42. (Previously presented) The computer readable medium of claim 40, wherein the LOB fragment payload comprises a pointer to a LOB location.

43. (Previously presented) The computer readable medium of claim 40, wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB, a pointer to a LOB location, or a cell reference.

44. (Previously presented) The computer readable medium of claim 38, further comprising a terminator fragment that marks the end of the object, said terminator fragment comprising a terminator type field indicating the terminator fragment is a terminator fragment.

45. (Previously presented) The computer readable medium of claim 38, wherein said at least one additional fragment comprises:

a collection start fragment comprising a collection start header;

wherein the collection start header comprises a collection start type field and a bit field;

wherein the collection start type field indicates the collection start fragment is a collection start fragment;

wherein the bit field indicates whether an order exists among a plurality of collection element fragments.

46. (Previously presented) The computer readable medium of claim 45, further comprising:
 at least one collection element fragment comprising a collection element header and collection element payload;
 wherein the collection element header comprises a collection element type field and a collection element length field;
 wherein the collection element type field indicates the collection element fragment is a collection element fragment;
 wherein the collection element length field indicates the a length of the collection element payload.
47. (Previously presented) The computer readable medium of claim 46, wherein the collection element payload comprises a data member in a collection of data members corresponding to said collection start fragment.
48. (Previously presented) The computer readable medium of claim 46, wherein the collection element header further comprises a collection element locator field that provides a unique location of a data member in a collection of data members.
49. (Currently Amended) A computer readable medium bearing a computer readable representation of an object that is serialized for efficient retrieval by computer hardware, the computer readable representation comprising:
 at least one Large Object (LOB) fragment comprising a LOB fragment header and a LOB fragment payload;
 wherein the LOB header comprises a LOB type field, a value type field, and a LOB length field;
 wherein the LOB type field indicates the LOB fragment is a LOB fragment;
 wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location;
 wherein the LOB length field indicates a length of the LOB fragment payload;
 a collection start fragment comprising a collection start header;

wherein the collection start header comprises a collection start type field and a bit field;

wherein the collection start type field indicates the collection start fragment is a collection start fragment;

wherein the bit field indicates whether an order exists among a plurality of collection element fragments; and

a plurality of collection element fragments associated with said collection start fragment, each of said collection element fragments comprising a collection element header and a collection element payload, wherein each collection element payload comprises only a data member of a collection element data type, said collection element data type comprising data of a same type as every collection element associated with said collection start fragment.

50-53. (Canceled)

54. (Currently Amended) The computer readable medium of claim 49, ~~further comprising:~~

~~a collection element fragment comprising a collection element header and collection element payload;~~

wherein the collection element header comprises a collection element type field and a collection element length field;

wherein the collection element type field indicates the collection element fragment is a collection element fragment;

wherein the collection element length field indicates a length of the collection element payload.

55. (Currently Amended) A computer readable medium bearing a computer readable representation of an object that is serialized for efficient retrieval by computer hardware, the computer readable representation comprising:

a collection start fragment comprising a collection start header;

wherein the collection start header comprises a collection start type field and a bit field;

wherein the collection start type field indicates the collection start fragment is a collection start fragment;

wherein the bit field indicates whether an order exists among a plurality of collection element fragments;

~~at least one collection element fragment comprising a collection element header and collection element payload;~~

a plurality of collection element fragments associated with said collection start fragment, each of said collection element fragments comprising a collection element header and a collection element payload, wherein each collection element payload comprises only a data member of a collection element data type, said collection element data type comprising data of a same type as every collection element associated with said collection start fragment;

wherein the collection element header comprises a collection element type field and a collection element length field;

wherein the collection element type field indicates the collection element fragment is a collection element fragment;

wherein the collection element length field indicates the a length of the collection element payload.

56. (Canceled)

57. (Previously presented) The computer readable medium of claim 55, wherein the collection element header further comprises a collection element locator field that provides a unique location of a data member in a collection of data members.

58. (Currently Amended) A computer readable medium bearing a computer readable representation of an object that is serialized for efficient retrieval by computer hardware, the computer readable representation comprising:

~~a single binary fragment associated with said object, said binary fragment comprising that comprises both~~ a binary fragment header and a binary fragment payload, wherein the binary fragment payload comprises all primitive data members of said object and wherein said primitive data members are in a storage engine record format;

wherein the binary fragment header comprises a type field and a length field;
wherein said primitive data members comprise only members of a primitive data type,
said primitive data type comprising at least integers and excluding at least collections; and
~~wherein the type field indicates the fragment is a binary fragment;~~
~~wherein the length field indicates a length of the binary fragment payload;~~
~~wherein the payload comprises a plurality of primitive data members in storage~~
~~engine record format; and~~
~~wherein said plurality of primitive data members are all of the primitive data members~~
~~of the object; and~~
wherein the type field indicates that the binary fragment is the only fragment of the
object.